No. 9200227

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Farmers Marketing Corporation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS REQUIRED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

DURUM WHEAT

'Duraking'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 30th *day of* April *in the year of our Lord one thousand nine hundred and* ninety-three.

Attest:

Kenneth B. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Farmers Marketing Corporation

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
D 5456

3. VARIETY NAME
AAA Durraking 5 AM 1993

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
P.O. BOX 60578, Phoenix, AZ 85082-0578
3501 E. Broadway Rd., Phoenix, AZ 85040

5. PHONE *(Include area code)*
(602) 437-4058

FOR OFFICIAL USE ONLY

PVPO NUMBER
9200227

FILING
Date: July 7, 1992
Time: ☑ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee: $2150.00
Date: July 7, 1992
Certificate Fee: $250.00
Date: Mar. 17, 1993

6. GENUS AND SPECIES NAME
Triticum turgidum L. variety durum

7. FAMILY NAME *(Botanical)*
Gramineae

8. CROP KIND NAME *(Common Name)*
Spring Durum Wheat

9. DATE OF DETERMINATION
1989

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Arizona

12. DATE OF INCORPORATION
5-1-85

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Rex K. Thompson, Plant Breeder
P.O. BOX 60578
Phoenix, AZ 85082-0578

~~Royce R. Richardson, President, CEO~~ Deceased AAA 3 May 1993
P.O. BOX 60578
Phoenix, AZ 85082-0578

PHONE *(Include area code)*: (602) 437-4058

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. [X] Exhibit A, Origin and Breeding History of the Variety.
b. [X] Exhibit B, Novelty Statement.
c. [X] Exhibit C, Objective Description of Variety.
d. [X] Exhibit D, Additional Description of Variety.
e. [X] Exhibit E, Statement of the Basis of Applicant's Ownership.
f. [X] Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 6-26-92.
g. [X] Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
[X] YES *(If "YES," answer items 16 and 17 below)* [ ] NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[X] YES [ ] NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] FOUNDATION [X] REGISTERED [X] CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
[ ] YES *(If "YES," through* [ ] Plant Variety Protection Act [ ] Patent Act. Give date: _____ .)
[X] NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[ ] YES (If "YES," give names of countries and dates)
[X] NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
Royce R. Richardson Royce R. Richardson	President, CEO	6/26/92
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
Rex K. Thompson Rex K. Thompson	Plant Breeder	6/26/92

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Duraking AAA-Sept 1993

EXHIBIT "A" - ORIGIN AND BREEDING HISTORY

"~~D 5456~~" durum wheat was derived by Farmers Marketing Corporation from a single F_2 head selection from a genetic male sterile facilitated recurrent selection (MSFRS) population. The population was developed by the University of Arizona and released to the public as AZ-MSFRS-86 Quality Enhanced Spring Durum Wheat Germplasm. The bulk F_5 was grown at Sacaton, Arizona in 1988. Twenty-four representative heads were snapped and grown in individual rows at Post Falls, Idaho. Thirteen F_6 rows were harvested and bulked as being uniform and free from genetic male sterility. Seed was increased at Maricopa, Arizona in 1989 with little evidence of further segregation. The present designated breeder seed was increased at Yuma, Arizona in 1991. One hundred head selections were grown at Maricopa, Arizona in 1991 to form the basis for the future foundation seed program.

D 5456 is uniform and stable. Rarely occurring (.001%) genetic recessive male sterile plants were rogued from the breeders seed increase at Yuma. Up to .05% of plants had awns which were grey or grey-black at maturity. Many of these were removed. The 1992 certified seed increase is expected to have grey or black tinted awns at a frequency of .02%. Some further occurrences of male sterility at .001% level is expected from outcross seed set on unidentified male sterile plants. The head row increase for foundation seed in 1992 is expected to reduce or eliminate male sterile and dark awn occurrence.

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EXHIBIT "B" - NOVELTY STATEMENT

'Duraking' AAA 5Am 1993

~~D 5456~~ is most similar to Mexicali 75 in plant type and appearance except for the following differences:

1) Seeds of D 5456 are .5mm longer but smaller than Mexicali 75 and have a narrow and shallow crease whereas Mexicali 75 seeds have a wide and shallow crease.

2) The cheeks of D 5456 seeds are rounded while those of Mexicali 75 are angular.

3) Spikes of D 5456 average 1.3 cm longer and are more amber than Mexicali 75 as compared to white in color.

4) Awns of D 5456 tend to be darker with some tinting of grey or black while awns of Mexicali 75 are always white.

In addition the following differences are noted in attached data sheets:

	D 5456	Mexicali 75
Average yield for 12 location years (lbs./a)	8338	7039
Lodging at Maturity (Rating 1-8)	2.2	5.7
Lodging at maturity (%)	10	42
Test weight (lbs. per bu)	64.1	63.0
Plant height (inches)	34.8	39.3
Days to 50% headed (after Mar. 1)	34	31
Kernel weight (grams per 1000 kernels)	43.8	48.2

FORM APPROVED: OMB NO. 0581-0066

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
COMMODITIES SCIENTIFIC SUPPORT DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Farmers Marketing Corporation

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
P.O. BOX 60578, Phoenix, AZ 85082-0578
3501 E. Broadway Rd., Phoenix, AZ 85040

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PVPO NUMBER 9200227

VARIETY NAME OR TEMPORARY DESIGNATION
D 5456 = 'Duraking' ARS Sept 1993

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:
[2] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[1] 1 = SPRING 2 = WINTER 3 = OTHER (*Specify*) _____
[3] 1 = SOFT 2 = HARD 3 = OTHER (*Specify*) Vitreous
[3] 1 = WHITE 2 = RED 3 = OTHER (*Specify*) Amber

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:
[1][0][6] FIRST FLOWERING
[1][1][5] LAST FLOWERING

4. MATURITY (*50% Flowering*):
[0][1] NO. OF DAYS *EARLIER* THAN .....
[0][3] NO. OF DAYS *LATER* THAN .....
[7][8] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Yavaros 75 8 = Mexicali 75

5. PLANT HEIGHT (*From soil level to top of head*):
[0][8][3] CM. HIGH
[0][3] CM. TALLER THAN .....
[1][1] CM. SHORTER THAN .....
[7][8] 7 = Aldura 8 = Mexicali 75 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (*See reverse*):
[2] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[1] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[0][4] NO. OF NODES (*Originating from node above ground*)
[2] Waxy bloom: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[1][5] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[1] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[1] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (*Specify*): _____
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[1][9] MM. LEAF WIDTH (*First leaf below flag leaf*)
[1] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[3][0] CM. LEAF LENGTH (*First leaf below flag leaf*):

11. HEAD:

[2] Density: 1 = LAX 2 = DENSE

[2] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) _____

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

[1][1] CM. LENGTH

[1][6] MM. WIDTH

12. GLUMES AT MATURITY:

[3] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[3] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[6] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[3] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[3] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[2] Brush: 1 = NOT COLLARED 2 = COLLARED

[ ] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[2] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[0][8] MM. LENGTH

[0][3.5] MM. WIDTH

[4][6] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] STEM RUST (Races) _____

[0] LEAF RUST (Races) _____

[0] STRIPE RUST (Races) _____

[0] LOOSE SMUT

[0] POWDERY MILDEW

[0] BUNT

[ ] OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[0] APHID (Bydv.)

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____

HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Yavaros 79	Seed size	Aldura
Leaf size	Mexicali 75	Seed shape	Aldura
Leaf color	Durex	Coleoptile elongation	Mexicali 75
Leaf carriage	Westbred Turbo	Seedling pigmentation	Mexicali 75

RECEIVED USDA, AMS JUL 7 1992 Plant Variety Protection Ofc

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form.

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

EXHIBIT "D" - ADDITIONAL DESCRIPTION

1 Durakind AAA 5 Apr 1993

Juvenile plant growth of ~~D 5456~~ resembles that of Westbred Turbo, very erect and slower than Mexicali 75. Plant color is a darker green than Mexicali 75 and Westbred Turbo, similar to Durex. Spikes are semi-dense, awned, strap to tapering and compared to white spikes of Mexicali 75, longer and slightly amber at maturity. Plants of D 5456 are shorter than other commercial varieties except Aldura and are similar to Aldura in lodging resistance. Seeds are smaller than those of Mexicali 75, similar to Aldura and the bush is faintly colored. Test weight of D 5456 is excellent, 1.1 lb. per bushel more than Mexicali 75 and only exceeded by the champion, Yavaros 79. Grain yield of D 5456 is superior to most commercial durum varieties in the Southwest with average yield 18% more than Mexicali 75 and equal to Westbred Turbo.

Overall semolina quality of D 5456 is similar to that of Mexicali and Turbo and superior to that of Yavaros 79 and Aldura. Gluten strength and % protein is similar to Mexicali 75 and Westbred Turbo but less than Durex, Westbred 881 and Reva. Semolina and spaghetti color, like Mexicali 75 is slightly better than Westbred Turbo, substantially greater than Yavaros 79, but less than Durex, Westbred 881, Aldura and Reva.

TABLE 1 - YIELD EVALUATIONS FOR 12 LOCATIONS YEARS

Grain Yield in Pounds per Acre

'Duraking' AAA 5 Apr 1993

	D 5456	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Sacaton, AZ 1988	7928	7663	8500	8514	6981	7546
Maricopa, AZ 1989	7581	7003	6684	6640	6288	7402
Maricopa, AZ 1990	6896	5211	6878	7260	6116	6308
Maricopa, AZ 1991	9897	7356	8504	7847	6957	9334
Yuma, AZ 1990	7973	7390	6279	7662	6729	--
Yuma, AZ 1991	7105	6440	6779	6489	5655	6525
U of CA, Imperial 1990	9610	8150	9230	8789	8250	9860
U of CA, Imperial 1991	12430	9887	11727	11490	10110	12370
U of CA, Davis 1990	7010	5740	7720	7720	6690	7700
U of CA, Davis 1991	8980	7450	7800	7920	7600	8460
U of CA, Kings 1990	6020	4800	6190	6640	5440	7040
U of CA, Kings 1991	8630	7380	8040	8630	7550	9210
AVERAGE	8338	7039	7861	7967	7085	8343

TABLE 2 - TEST WEIGHTS

TEST WEIGHTS IN POUNDS PER BUSHEL

	~~D 5456~~ 'Duraking' AAA Sapp 1993	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Sacaton, AZ 1988	65.0	64.0	66.0	63.0	65.0	64.5
Maricopa, AZ 1989	65.0	64.0	65.0	63.0	63.5	63.3
Maricopa, AZ 1990	63.0	63.0	65.0	62.0	64.0	62.0
Maricopa, AZ 1991	65.5	65.5	66.5	66.0	64.5	65.5
U of CA, Imp. 1990	62.5	60.8	63.8	62.0	60.8	61.8
U of CA, Imp. 1991	64.0	63.0	64.8	63.5	62.5	63.5
U of CA, Kings 1990	63.9	62.7	63.8	63.8	62.6	64.3
U of CA, Davis 1990	62.8	61.1	63.5	63.5	61.2	60.6
AVERAGE	64.1	63.0	64.8	63.4	63.0	63.2

TABLE 3 - PLANT HEIGHTS

	PLANT HEIGHT AT MATURITY IN INCHES					
	~~D 5456~~ 'Duraking' AAA 5 Apr 1993	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Maricopa, AZ 1989	37	--	37	36	36	38
Maricopa, AZ 1990	32	37	33	31	36	35
Maricopa, AZ 1991	35	43	41	36	39	41
U of CA, Imp. 1990	32	36	36	31	36	37
U of CA, Imp. 1991	31	37	35	31	37	36
U of CA, Kings 1990	33	35	34	30	35	38
U of CA, Kings 1991	38	43	39	35	41	40
U of CA, Davis 1990	37	40	38	35	40	39
U of CA, Davis 1991	38	43	41	38	40	42
AVERAGE	34.8	39.3	37.1	33.7	37.8	38.4
AVERAGE (Centimeters)	83.5	94.3	89.0	80.9	90.7	92.8

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TABLE 4 - HEADING DATE

Days to 50% Headed, After March 1

/ Durakind AAA 4 Apr 1993

	~~D-5456~~	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Sacaton, AZ 1988	30	24	28	30	25	31
Maricopa, AZ 1989	24	--	23	23	19	28
Maricopa, AZ 1990	32	28	34	33	24	35
Maricopa, AZ 1991	28	24	28	30	25	33
U of CA-Imp. 1990	26	22	28	28	24	27
U of CA-Imp. 1991	25	20	26	27	19	27
U of CA-Davis 1990	51	46	50	52	48	50
U of CA-Davis 1991	57	54	59	58	52	60
AVERAGE	34	31	35	35	30	37

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TABLE 5 - MATURITY DATE

Days to Maturity, After March 1

Durahing AAA 54m 1993

	~~D 5456~~	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Sacaton, AZ 1988	83	79	81	82	77	84
Maricopa, AZ 1989	74	70	76	75	68	79
Maricopa, AZ 1990	81	79	82	81	79	82
Maricopa, AZ 1991	87	83	88	85	85	89
U of CA-Imp. 1990	73	72	76	76	75	75
U of CA-Imp. 1991	78	75	79	79	77	78
U of CA-Davis 1990	100	98	100	100	102	98
U of CA-Davis 1991	103	105	105	106	107	107
AVERAGE	85	83	85	86	84	87

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TABLE 6 - STANDABILITY

	~~D 5456~~ 'Duraking' AAA 5 Apr 993	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
	LODGING AT MATURITY IN PERCENT					
SACATON AZ 1988	0	20	TRACE	0	0	60
MARICOPA AZ 1989	0	-0-	16	0	0	31
MARICOPA AZ 1990	38	68	65	43	55	75
MARICOPA AZ 1991	0	40	5	0	0	2
AVERAGE	10	42	22	11	14	42
RANK	1	5	4	2	3	5
	LODGE RATING AT MATURITY (1 - 8)					
U OF CA IMP. 1980	1.3	5.8	5.0	1.0	2.3	5.0
U OF CA IMP. 1991	1.3	4.8	3.0	2.5	2.0	3.0
U OF CA DAVIS 1990	4.0	6.5	7.3	2.5	6.5	7.5
AVERAGE	2.2	5.7	5.1	2.0	3.6	5.2
RANK	2	6	4	1	3	5

Rating scale for lodging: 1 = 0-3%, 2 = 4-14%, 3 = 15-29%, 4 = 30-49%, 5 = 50-69%, 6 = 0-84%, 7 = 85-95%, 8 = 96-100%.

TABLE 7 - GRAIN PROTEIN

	GRAIN PROTEIN IN PERCENT					
	'Duraking' AAA 5 Apr 1993 ~~D 5456~~	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
MARICOPA AZ 1990	13.9	14.0	12.8	--	14.3	--
MARICOPA AZ 1991	15.0	--	13.8	--	14.1	13.3
U OF CA IMP. 1990	14.0	13.9	13.4	14.6	15.0	14.1
U OF CA IMP. 1991	11.8	12.2	11.1	12.0	12.9	11.6
U OF CA DAVIS 1990	13.2	12.9	12.6	12.8	13.8	12.4
U OF CA DAVIS 1991	11.8	11.9	10.5	11.3	12.1	11.5
U OF CA KINGS 1990	13.1	13.6	13.0	13.2	14.2	13.6
U OF CA KINGS 1991	11.3	10.6	10.6	11.3	11.3	11.3
AVERAGE	13.0	12.7	12.2	(12.5)	13.5	(12.5)

TABLE 8 - KERNEL WEIGHT

	WEIGHT OF 1000 KERNELS IN GRAMS					
	'Durabing' AAA 5441 1993 D 5456	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
U Of CA, Imp. 1990	42.5	46.3	47.4	44.2	49.8	47.8
U of CA, Imp. 1991	48.1	56.0	55.6	47.7	56.8	52.5
U of CA, Davis 1990	45.5	48.5	53.2	46.9	55.9	53.2
U of CA, Davis 1991	45.2	51.3	55.7	48.9	54.2	52.2
U of CA, Kings 1990	43.3	49.8	54.3	46.9	52.4	50.3
U of CA, Kings 1991	52.3	58.8	63.4	52.8	57.8	60.3
AVERAGE	46.2	51.8	54.9	47.9	54.5	52.7

TABLE 9 - SEMOLINA EXTRACTION

SEMOLINA EXTRACTION IN PERCENT

	~~D 5456~~ 'Duraking' ABA5 Apr 1993	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
U of CA, Imp. 1990	62.5	64.7	63.3	60.2	62.3	61.9
U of CA, Davis 1990	63.4	64.9	63.0	66.0	63.5	63.5
U of CA, Kings 1990	63.6	62.9	63.0	62.3	60.8	60.6
AVERAGE	63.2	64.2	63.1	62.8	62.2	62.0

TABLE 10 - MIXOGRAPH

MIXOGRAPH SCORE (HIGHER NUMBER = STRONGER CURVE)

'Duraking' AAA 57th 1993

	~~D 5456~~	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
Maricopa, AZ 1990	6	6	4	--	8	--
Maricopa, AZ 1991	5	--	3	--	7	4
U of CA, Imp. 1990	3	5	2	3	7	4
U of CA, Imp. 1991	4	5	2	3	7	4
U of CA, Davis 1990	3	6	4	2	3	5
U of CA, Kings 1990	6	6	4	2	6	4
AVERAGE	4.5	5.6	3.2	(2.5)	6.3	(4.2)

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TABLE 11 COLOR SCORES*

Visual Spaghetti and Semolina Dust Scores (High is Best)

~~D-5456~~ Durakino AAA 5 Apr 1993

	MEXICALI 75				YAVAROS 79						WESTBRED TURBO	
	VIS. COL.	DUST COL.	VIS. COL.	DUST COL.	VIS. COL.	DUST COL.	VIS. COL.	DUST COL.	VIS. COL.	DUST COL.	VIS. COL.	DUST COL.
U of CA, Imperial 1990	9.5	85	9.0	85	8.0	70	9.5	95	9.5	90	9.0	85
U of CA, Kings 1990	9.0	85	9.5	85	8.0	75	9.5	90	9.5	90	8.5	80
U of CA, Davis 1990	8.5	85	8.5	80	8.0	70	9.0	90	9.5	90	9.0	85
AVERAGE	9.0	85	9.0	83	8.0	72	9.3	92	9.5	90	8.8	83

*Analysis by Hard Red Spring and Durum Quality Laboratory USDA, NDSU, Fargo, ND

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TABLE 12 QUALITY ANALYSIS BY BARILLA COMPANY, PARMA, ITALY 1988

	BLACK POINT %	ASH % DRY BASIS	PROTEIN % DRY BASIS	GLUTEN % DRY BASIS	GLUTEN STRENGTH BARILLA TEST RATING 1-10 0 HR.	24 HR.
Durex (Duraking)	14	1.87	16.30	11.40	8.5	9.0
D 5456 5 Apr 1993	1	1.77	13.42	6.81	9.0	8.5
Mexicali 75	8	2.00	12.89	10.90	7.0	6.0
Yavaros	10	1.86	13.90	4.06	6.0	--
Aldura	6	1.96	14.52	7.19	5.0	3.0

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TABLE 13 BLACK POINT OCCURRENCE

	'Duraking' ~~D 5456~~ 5 Apr 1993	RATING (1 TO 8) MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
U of CA, Imperial 1990	1.5	1.5	2.0	3.5	2.0	1.5
U of CA, Imperial 1991	2.0	1.5	1.5	2.0	2.0	1.0
U of CA, Davis 1990	1.0	1.0	2.0	2.0	1.0	1.0
U of CA, Davis 1991	1.0	1.5	1.5	2.0	2.0	1.5
U of CA, Kings 1990	1.0	1.0	1.0	1.5	2.0	1.0
U of CA, Kings 1991	1.0	2.0	2.0	2.0	2.0	1.0
AVERAGE	1.25	1.41	1.67	2.17	1.83	1.17

Rating Scale for Black Point: 1 = 0-3%, 2 = 4-14%, 3 = 15-29%, 4 = 30-49%

TABLE 14 SHATTER

		RATING AT MATURITY (1 TO 8)					
		'Duraking' ~~D 5456~~ AAA 5 Apr 1993	MEXICALI 75	YAVAROS 79	ALDURA	DUREX	WESTBRED TURBO
U of CA, Imperial	1990	1.5	1.8	1.0	1.0	2.5	2.0
U of CA, Imperial	1991	1.5	2.0	1.0	1.0	--	1.5
AVERAGE		1.5	1.9	1.0	1.0	(2.5)	1.75

Rating Scale for Shatter: 1 = 0-3%, 2 = 4-14%, 3 = 15-29%, 4 = 30-49%

EXHIBIT "E" - STATEMENT OF BASIS OF APPLICANTS OWNERSHIP

Regular employees of the applicant for protection, Farmers Marketing Corporation, have developed the named variety.

Farmers Marketing Corporation is the proprietary owner and intended commercial user of the variety.